



PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF COMMERCE, HUMAN SCIENCES AND EDUCATION
DEPARTMENT OF ACCOUNTING, ECONOMICS AND FINANCE

QUALIFICATION: BACHELOR OF ACCOUNTING HONOURS	
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COURSE CODE: AMA811S	COURSE NAME: ADVANCED MANAGEMENT ACCOUNTING
DATE: MAY/JUNE 2025	PAPER: THEORY AND CALCULATIONS
DURATION: 3 HOURS	MARKS: 100

2ND OPPORTUNITY EXAMINATION	
EXAMINER	Dr. MOSES NYAKUWANIKA
MODERATOR:	LAZARUS SHINKEVA

INSTRUCTIONS
<ol style="list-style-type: none">1. Capture your full name, student number and assessment number on the first page2. Answer ALL the questions and manage your time properly.3. Number each page correctly4. Write clearly and neatly.5. Do not write in pencil and do not use tip-ex, as this will not be marked.6. The names of people and businesses used throughout this assessment do not reflect the reality and may be purely coincidental.7. SHOW ALL WORKINGS!

THIS QUESTION PAPER CONSISTS OF 7 PAGES (excluding this front page)

QUESTION 1

CASE STUDY

Traditional Group Ltd. (“the Group”) has been in business for the last eight decades. The Group is proud of its longevity and of its growth and comparative financial stability over that time. It began as a small manufacturing company, producing and distributing a range of engineering products throughout Ireland. Growth has been financed mainly by the reinvestment of profits and by borrowings to a lesser extent. For the most part, this growth has taken the form of expansion of existing business units and the establishment of new units from start-up. The Group has never accepted equity investment from outside the **O’Sullivan family (who founded the Group and has owned it ever since)** and has only rarely bought equity stakes in other companies.

You met recently with the Chief Executive Officer (CEO), Mr **Peter**. *“Our managerial and business style means that we like to think of our Group as traditional and tightly managed, but not conservative in any prejudicial sense. For example, most of our business units are engaged in manufacturing and/or distributing physical products through traditional distribution channels. We don’t do much selling over the Internet and only one of our business units is involved in the services sector. It’s not that we have made any deliberate decision to lock ourselves out of Internet selling or services sectors, it’s just that we have made different choices as to what sectors we want to be in”.*

Mr Peter is confident that the fact that the business is 100% family-owned has not been detrimental to the calibre of management. Approximately 10% of business unit managers are family members and Peter believes that they have all been appointed on merit and are subject to the same performance management assessment controls as the other **90%**. *“Business unit managers have a fair degree of ongoing autonomy, but they know that they are assessed on a periodic and regular basis”, says Peter. “Everyone has an annual profit target or an annual Return on Investment (ROI) target for his or her business unit, and they know that if they achieve that target then they are ‘safe’ – the Christmas bonus, the additional job security, and the pat on the back from me will all be forthcoming. Sometimes, a manager will want to pursue a business opportunity with a longer timeframe – for example, take a strategic initiative which will adversely affect profits in the current year but will pay off handsomely in the long term. That’s fine by me; it’s a form of ‘outside-the-box’ thinking. But it’s ‘part of the deal’ in that type of situation that I need to be shown what the long-term game plan is and when it’s going to pay off – in other words, that someone isn’t just trying to conceal bad outcomes and decisions in the current year”.*

Mr Peter believes that it is ultimately better for the Group if he respects business unit **managers’ autonomy as much** as possible. He recognises that there may be conflicts both within and/or between business units, but he believes that it is part of each business unit manager’s job to resolve those conflicts (and to do so in the best interests of the Group).

You have had an opportunity to visit several business units and have made notes about specific business problems and control issues which these face. Further details are provided as follows:

The Alpha Business Unit (ABU) has recently completed research and development (R & D) work on a new consumer electronics product, at a cost of \$400,000. Following conversations with various functional managers within ABU, Joseph Kanengoni (the **business unit's general manager**) developed the following forecast for the four phases of the product's lifecycle:

	Introduction Phase	Growth phase	Maturity phase	Decline phase
Units sold	20,000	50,000	100,000	10,000
Unit cost incurred in production and distribution	\$4.10	\$3.40	\$3.00	\$3.80

A dispute has developed between Joseph and ABU's marketing manager about the most appropriate selling price to be charged for the product in the Introduction phase. Joseph has stated that while ABU should not aspire to make a profit on the product in this phase, nevertheless the price charged should be high enough to recover the production and distribution costs in this phase in full plus one-quarter of the R & D costs. By contrast, the marketing manager believes that the price should be kept to a minimum in the Introduction phase. Specifically, she favors a price that would equal the per-unit lifecycle cost of the product (where R & D is included in lifecycle cost). She believes that consumers are potentially quite price-sensitive and that the sales quantities indicated above can be taken as a guideline but should not be taken for granted.

Mr Peter has told you that he is unimpressed by this internal wrangling within ABU and in any case he cannot understand why the selling price should differ between different phases of the lifecycle. He has indicated that he has tentatively decided to direct Joseph to adopt a constant selling price in all phases of the lifecycle and that he plans to set the following explicit profit targets in relation to the product:

- **Net profit of at least 47% of sales in each phase of the product lifecycle, before taking account of R & D costs, and**
- **Net profit of at least 20% of sales over the product lifecycle, after taking account of R & D costs.**

Note: Ignore inflation and the time value of money.

YOU ARE REQUIRED TO:

Prepare a report for Mr Peter in which you:

- (a) Critically assess and calculate the prices proposed for the launch phase by (i) Joseph Kanengoni and (ii) the marketing manager.

You are also required to evaluate (and suggest likely reasons for) the projected trend in unit cost during the four phases of the product lifecycle. **(12 marks)**

(b) Assuming that Mr Peter has decided to direct Joseph to adopt a constant selling price in all phases of the lifecycle and that this constant selling price is the average of the two prices that you arrived at in your answer to part (a) above. Will the profit targets set out by Mr Peter be achieved? Justify your answer. **(7 marks)**

(c) Evaluate critically whether a constant selling price in all phases of the lifecycle is appropriate in this case. Make appropriate reference to the results of your calculations in part (a) and be specific about any proposals for changing the pricing strategy. No additional calculations are required for this part. **(6 marks)**

[Total: 25 Marks]

QUESTION 2

Bits and Pieces (B&P) operates a retail store selling spares and accessories for the car market. The store has previously only opened for six days per week for the 50 working weeks in the year, but B&P is now considering also opening on Sundays. The sales of the business on Monday through to Saturday average at \$10,000 per day with an average gross profit of 70% earned.

B&P expects that the gross profit % earned on a Sunday will be 20 percentage points lower than the average earned on the other days in the week. This is because they plan to offer substantial discounts and promotions on a Sunday to attract customers. Given the price reduction, Sunday sales revenues are expected to be 60% more than the average daily sales revenues for the other days. These Sunday sales estimates are for new customers only, with no allowance being made for those customers that may transfer from other days.

B&P buys all its goods from one supplier. This supplier gives a 5% discount on all purchases if annual spend exceeds \$1,000,000.

It has been agreed to pay time and a half to sales assistants that work on Sundays. The normal hourly rate is \$20 per hour. In total, five sales assistants will be needed for the six hours that the store will be open on a Sunday. They will also be able to take a half-day off (four hours) during the week. Staffing levels will be allowed to reduce slightly during the week to avoid extra costs being incurred.

The staff will have to be supervised by a manager, currently employed by the company and paid an annual salary of \$80,000. If he works on a Sunday, he will take the equivalent time off during the week when the assistant manager is available to cover for him at no extra cost to B&P. He will also be paid a bonus of 1% of the extra sales generated on the Sunday project.

The store will have to be lit for \$30 per hour and heated for \$45 per hour. The heating will come on two hours before the store opens in the 25 'winter' weeks to make sure it is warm

enough for customers to come in at opening time. The store is not heated in the other weeks.

The rent of the store amounts to \$420,000 per annum.

YOU ARE REQUIRED TO:

a) Calculate whether the Sunday opening incremental revenue exceeds the incremental costs over a year (ignore inventory movements) and on this basis conclude as to whether Sunday opening is financially justifiable.

(18 marks)

b) Discuss whether the manager's pay deal (time off and bonus) is likely to motivate him.

(4 marks)

c) Briefly discuss whether offering substantial price discounts and promotions on Sunday is a good suggestion.

(3 marks)

[Total 25 marks]

QUESTION 3

Charm Inc, a software company, has developed a new game, 'Fingo', which it plans to launch soon. Sales of the new game are expected to be very strong, following a favorable review by a popular PC magazine. Charm Inc has been informed that the review will give the game a 'Best Buy' recommendation. Sales volumes, production volumes and selling prices for 'Fingo' over its four-year life are expected to be as follows

Year	1	2	3	4
Sales and production (units)	150 000	70 000	60 000	60 000
Selling price (\$ per game)	25	24	23	22

Financial information on 'Fingo' for the first year of production is as follows:

	\$
Direct material cost	5.40 per game
Other variable production cost	6.00 per game
Fixed costs	4.00 per game

Advertising costs to stimulate demand are expected to be \$650,000 in the first year of production and \$100,000 in the second year of production. No advertising costs are expected in the third and fourth years of production. Fixed costs represent incremental

cash fixed production overheads. 'Fingo' will be produced on a new production machine costing \$800,000. Although this production machine is expected to have a useful life of up to ten years, government legislation allows Charm Inc to claim the capital cost of the machine against the manufacture of a single product. Capital allowances will therefore be claimed on a straight-line basis over four years.

Charm Inc pays tax on profit at a rate of 30% per year and tax liabilities are settled in the year in which they arise. Charm Inc uses an after-tax discount rate of 10% when appraising new capital investments. Ignore inflation.

REQUIRED:

- a) Calculate the net present value of the proposed investment and comment on your findings. **(16 marks)**
- b) Calculate the internal rate of return of the proposed investment and comment on your findings. **(5 marks)**
- c) Discuss the reasons why the net present value investment appraisal method is preferred to other investment appraisal methods such as payback, return on capital employed and internal rate of return. **(4 marks)**

[Total = 25 marks]

QUESTION 4

Bath Co is a company specialising in the manufacture and sale of baths. Each bath consists of a main unit plus a set of bath fittings. The company is split into two divisions, A and B. Division A manufactures the bath and Division B manufactures sets of bath fittings. **Currently, all of Division A's sales are made externally. Division B, however, sells** to Division A as well as to external customers. Both divisions are profit centres.

The following data is available for **Division A**

The current selling price for each bath	\$450
Costs per bath:	
Fittings from Division B	\$75
Other materials from external suppliers	\$200
Labour costs	\$45
Annual fixed overheads	\$7,440,000
Annual production and sales of baths (units)	80,000
Maximum annual market demand for baths (units)	80,000

The following data is available for **Division B**

Current external selling price per set of fittings	\$80
Current price for sales to Division A	\$75
Costs per set of fittings:	
Materials	\$5

Labour costs	\$15
Annual fixed overheads	\$4,400,000
Maximum annual production and sales of sets of fittings (units) (Including internal and external sales)	200,000
Maximum annual external demand for sets of fittings (units)	180,000
Maximum annual internal demand for sets of fittings (units)	80,000

The transfer price charged by Division B to Division A was negotiated some years ago between the previous divisional managers, who have now both been replaced by new managers. Head Office only allows Division A to purchase its fittings from Division B, although the new manager of Division A believes that he could obtain fittings of the same quality and appearance for \$65 per set if he was given the autonomy to purchase from outside the company. Division B makes no cost savings from supplying internally to Division A rather than selling externally.

YOU ARE REQUIRED TO:

- Under the current transfer pricing system, prepare a profit statement showing the profit for each of the divisions and for Bath Co as a whole. Your sales and costs figures should be split into external sales and inter-divisional transfers, where appropriate. **(11 marks)**
- Head Office is considering changing the transfer pricing policy to ensure maximisation of company profits without demotivating either of the divisional managers. Division A will be given autonomy to buy from external suppliers and Division B to supply external customers in priority to supplying to Division A.

Calculate the maximum profit that could be earned by Bath Co if transfer pricing is optimised. **(11 marks)**

- Discuss the issues of encouraging divisional managers to make decisions in the interests of the company, where transfer pricing is used. Provide a reasoned recommendation of a policy Bath Co should adopt. **(3 marks)**

[Total 25 marks]

End of Examination